

PATENT CLAIMS:

1. A method for manufacturing components, namely vane segments, for a gas turbine, in particular for an aircraft engine, characterized in that each vane segment includes at least two vanes, and the vane segment is manufactured from a plurality of vanes via powder metallurgy injection molding.
2. The method as recited in Claim 1, characterized in that the vane segment is designed as a guide vane segment and includes at least two guide vanes.
3. The method as recited in Claim 2, characterized in that the guide vane segment includes three or four guide vanes.
4. The method as recited in one or more of Claims 1 through 3, characterized in that, in the case of the powder metallurgy injection molding, in particular a metal powder having a binding agent is first mixed to form a homogeneous material, at least one molded body then being formed from the homogeneous material via injection molding, the molded body or each molded body then being subjected to a debinding process, the molded body or each molded body then being compressed via sintering to form at least one vane segment having the desired geometric properties.
5. The method as recited in Claim 4, characterized in that in order to manufacture one vane segment from at least two vanes, molded bodies for each vane are manufactured separately via injection molding, the molded bodies for the vanes being joined together prior to the debinding process to form one molded body for the vane segment.
6. The method as recited in Claim 5, characterized in that the molded bodies for the vanes are joined together prior to the debinding process in the green state to form one molded body for the vane segment.

7. The method as recited in Claim 5 or 6,
characterized in that this molded body for the vane segment is then subjected to a uniform debinding process and uniform sintering.
8. The method as recited in Claim 4,
characterized in that to manufacture one vane segment from at least two vanes, molded bodies for each vane are manufactured separately via injection molding, the molded bodies for the vanes undergoing a separate debinding process, and the molded bodies for the vanes being subsequently joined together to form one molded body for the vane segment.
9. The method as recited in Claim 8,
characterized in that the molded bodies for the vanes are joined together in the pre-sintered state to form one molded body for the vane segment.
10. The method as recited in Claim 8 or 9,
characterized in that this molded body for the vane segment is then subjected to uniform sintering.
11. The method as recited in Claim 4,
characterized in that to manufacture one vane segment from at least two vanes, a joint molded body for the vane segment, i.e., for all vanes of the vane segment, is manufactured via injection molding.
12. The method as recited in Claim 11,
characterized in that the molded body for the vane segment is subjected to a uniform debinding process and uniform sintering.
13. A component, namely a vane segment, for a gas turbine, in particular for an aircraft engine,
characterized in that the vane segment (18) includes at least two vanes (19), and the vane segment (18) is manufactured from a plurality of vanes (19) via powder metallurgy injection molding.

14. The component as recited in Claim 13,
characterized in that the vane segment (19) is designed as a guide vane segment and
includes at least two guide vanes (18).
15. The component as recited in Claim 14,
characterized in that the guide vane segment includes three or four guide vanes.
16. The component as recited in one or more of Claims 13 through 15,
characterized in that the vane segment is manufactured via a method according to one or
more of Claims 4 through 12.